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EXAMINER
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GREENE, JASON M

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/689,413

Applicant(s)

DIMICELLI, ANTHONY

Examiner

Jason M. Greene

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/3/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.84(u)(1) because the view numbers are not preceded by the abbreviation "FIG.". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claims***

2. With regard to claim 1, the Examiner suggests Applicants insert a comma after the phrase "an outer front panel" in line 23 to improve the readability of the claim language.

3. With regard to claim 2, the Examiner suggests Applicants change the word "portioned" in line 3 to the word "positioned" to correct an apparent typographical error. The Examiner also suggests Applicants insert a comma after the phrases "the outer top side" and "the inner top side" in lines 7 and 11, respectively, to correct a minor grammatical informality. Furthermore, the Examiner suggests Applicants change the word "and" in lines 13, 15, 17 and 19 to the word "positioned" to improve the readability of the claim language.

4. With regard to claim 14, the Examiner has interpreted the phrase "the first frame" in line 2 as being the outer frame and the phrase "the second frame" in line 4 as being the inner frame. If these interpretations are correct, the Examiner suggests Applicants rewrite the phrases "the first frame" and "the second frame" as "the outer frame" and "the inner frame", respectively, to improve antecedent basis.

5. With regard to claims 15 and 16, the Examiner notes that the phrase "the wire mesh" has been interpreted as being the expanded mesh recited in claim 2. If this

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interpretation is correct, the Examiner suggests Applicants rewrite the phrase "the wire mesh" as "the expanded mesh" to clarify antecedent basis.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 2, 7, 8 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites adhering the fourth flap to the fifth flap and the sixth flap to the seventh flap to form an outer box and forming the outer first side and outer second side in lines 25-26. However, claim 2 recited the fourth flap being part of the inner frame bottom side in lines 11-18. It appears as though lines 25-26 should recite the fifth thru eighth flaps instead of the fourth thru seventh flaps. Additionally, there is insufficient antecedent basis for the limitation "the outer first side and the outer second side" in the claim. For examinations purposes, the Examiner has assumed the phrase was intended to read "the outer top side and the outer bottom side". If this assumption is correct, the Examiner suggests Applicants amend the claim accordingly.

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Claim 2 recites the limitation "the outer side" in line 8. However, the claim recites the outer frame having an outer first side and an outer second side in line 6. Therefore, it is not clear if the phrase "the outer side" refers to the outer first side, the outer second side, or both the outer first side and the outer second side. Similarly, claim 2 also recites the limitation "the inner side" in line 12. Since the claim recites the inner frame having an inner first side and an inner second side in line 10. Therefore, it is not clear if the phrase "the inner side" refers to the inner first side, the inner second side, or both the inner first side and the inner second side. For examination purposes, the Examiner has interpreted the phrases as referring to either the first or second sides of the inner and outer frames.

Claim 7 recites the limitation "the locking component" in line 2. There is insufficient antecedent basis for this limitation in the claim. For examination purposes, the Examiner has assumed that claim 7 was intended to depend to from 6. If this assumption is correct, the Examiner suggests Applicants correct the claim dependency accordingly.

Claim 8 recites the locking component being a slidable tab in line 1. However, claim 7, from which claim 8 depends, recites the locking component being tape. Therefore, it is not clear if the locking component of claim 8 is a slidable tab, tape or a combination of both. For examination purposes, the Examiner has assumed that claim 8

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was intended to depend to from 6. If this assumption is correct, the Examiner suggests Applicants correct the claim dependency accordingly.

Claim 11 recites the limitation "the at least two front support members and the at least two back support members" in lines 1 and 2. However, claim 2, from which claim 11 depends, recites the apparatus having at least two inner and outer front support members and at least two inner and outer back support members in lines 13-20.

Therefore, it is not clear if the phrases "the at least two front support members" and "the at least two back support members" refer to the inner or outer front and back support members. For examination purposes, the Examiner has interpreted the phrases as referring to either or both of the inner and outer front and rear support members.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-6, 8, 10, 11, 13, 15, 16, 18, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman in view of Kubokawa et al.

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With regard to claims 2 and 18, Chapman discloses an apparatus for air filtration comprising a filter media (3) comprising a first edge and a second edge, an outer frame (5) comprising an outer front panel (formed by the front portion of 5), an outer back panel (formed by the back portion of 5), an outer top side (top side of 5), an outer bottom side (bottom side of 5), and outer first side (right side of 5), and an outer second side (formed by the left-most portions of the top and bottom sides of 5), wherein the outer front panel and the outer back panel are connected at the outer top side (by the top portion of the top side of 5), the outer bottom side (by the bottom portion of the bottom side of 5), and the outer first side (by the outer portion of the right side of 5), an inner frame (7) comprising an inner front panel (formed by the front portion of 7), an inner back panel (formed by the back portion of 7), an inner top side (top side of 7), an inner bottom side (bottom side of 7), an inner first side (right side of 7), and an inner second side (left side of 7), wherein the inner front panel and the inner back panel are connected at the inner top side (by the top portion of the top side of 7), the inner bottom side (by the bottom portion of the bottom side of 7), and the inner first side (by the outer portion of the left side of 7), at least two inner front and back support members (formed by grids 4) positioned in the inner front and back panels creating inner front and back openings, wherein the inner frame slides into the outer frame between the outer front panel and outer back panel, a plurality of clips (a pair of clips 20) to hold the outer frame to the inner frame, and wherein the filter media is disposed inside the outer frame and the inner frame and the first edge is attached to the outer first side and the second edge is attached to the inner first side in Figs. 1-5 and col. 2, line 46 to col. 4, line 41.



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Chapman does not disclose the filter media being pleated and comprising a pleated first edge and a pleated second edge, an expandable mesh being positioned on one side of the pleated filter media, wherein the expanded mesh is bonded to the pleated filter media, or at least two outer front and back support members being positioned in the outer front and back panels creating outer front and back openings.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the at least two inner front and back support members of Chapman into the outer front and back panels to provide additional mechanical support for the air filter media in high flow rate environments.

Kubokawa et al. discloses a similar air filtration apparatus comprising a pleated filter media (10) comprising a pleated first edge (72) and a pleated second edge (74) and an expandable mesh (14) positioned on one side of the pleated filter media, wherein the expandable mesh is bonded (see col. 5, lines 34-35) to the pleated filter media in Figs. 1 and 6-8 and col. 3, line 9 to col. 7, line 19.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pleated filter media and expandable mesh of Kubokawa et al. into the apparatus of Chapman to provide a filter media that can be collapsed to a compact form for shipping and storage and later re-expanded for installation, as suggested by Kubokawa et al. in col. 4, line 54 to col. 5, line 12.

With regard to claim 3, Kubokawa et al. discloses the pleated filter media having a pleat spacing of 40 mm (7.6 pleats per foot) in col. 5, lines 54-59.

With regard to claim 4, Kubokawa et al. discloses the pleated media being a synthetic electrostatic filter media (FILTRETE™) in col. 6, lines 46-60.

With regard to claim 5, Chapman discloses the outer and inner frames having a rectangular shape in Fig. 1

With regard to claims 6 and 8, Chapman discloses the apparatus further comprising a locking component disposed on the outer frame to prevent movement of the inner frame while supporting the filter media, wherein the locking component is a slidable tab (one of the clips 20) adapted for engaging the outer frame and the inner frame in Figs. 1-5 and col. 3, lines 27-67.

With regard to claims 10, 15 and 16, Kubokawa et al. discloses the expandable mesh being formed from welded wire (metal mesh) and laminated to the pleated filter media with glue (adhesive) in col. 5, lines 34-38.

With regard to claims 11 and 13, Chapman discloses the at least two front support members and the at least two back support members each forming a rectangular shape (grids 4), wherein the outer frame comprises a first horizontal support and a first vertical support and the inner frame further comprises a second horizontal

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support and a second vertical support (formed by the wires comprising the grids 4) in Fig. 1 and col. 2, lines 46-58.

With regard to claims 19 and 21, Chapman does not disclose the frames being formed from one of the recited materials.

Kubokawa et al. discloses forming the frame members from a plastic material in col. 3, lines 31-44.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the plastic material of Kubokawa et al. into the inner and outer frames of Sweeney to provide inner and outer frames that are more resistant to environmental degradation.

9. Claims 2-5, 10, 11, 13, 15, 16, 18, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney in view of Kubokawa et al. and Wolfe.

With regard to claims 2 and 18, Sweeney discloses an apparatus for air filtration comprising a pleated media (17) comprising an expandable mesh having a pleated first edge and a pleated second edge, an outer frame (11,14) comprising an outer front panel (formed by the front portions of 11,14), an outer back panel (formed by the back portions of strips 11,14), an outer top side (formed by the top strip 14), an outer bottom side (formed by the bottom strip 14), an outer first side (formed by strip 11), and an outer second side (formed by the left sides of strips 14), wherein the outer front panel

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and outer back panel are connected at the outer top side (by the top portion of top strip 14), the outer bottom side (by the bottom portion of bottom strip 14), and the first outer side (by the right outer side of strip 11), an inner frame (10,13) comprising an inner front panel (formed by the front portions of strips 11,14), an inner back panel (formed by the back portions of 10,13), an inner top side (formed by the top strip 13), an inner bottom side (formed by the bottom strip 13), an inner first side (formed by strip 10), and an inner second side (formed by the right sides of strips 13), wherein the inner front panel and inner back panel are connected at the inner top side (by the top portion of top strip 13), the inner bottom side (by the bottom portion of bottom strip 13), and the first inner side (by the left outer side of strip 10), wherein the inner frame slides into the outer frame between the outer front panel and the outer back panel, wherein the pleated filter media is disposed inside the outer frame and the inner frame and the pleated first edge is attached to the outer first side and the pleated second edge is attached to the inner first side in Figs. 1-5 and page 1, col. 1, line 15 to page 1, col. 2, line 92.

Sweeney does not disclose a second expandable mesh being positioned on one side of the pleated filter media, wherein the expandable mesh is bonded to the pleated filter media, at least two outer front support members positioned in the outer front panel creating an outer front panel opening, at least two outer back support members positioned in the outer back panel creating an outer back panel opening, at least two inner front support members positioned in the inner front panel creating an inner front panel opening, at least two inner back support members positioned in the inner back

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panel creating an inner back panel opening, or a plurality of clips to hold the outer frame to the inner frame.

Kubokawa et al. discloses a similar air filtration apparatus comprising a pleated filter media (10) comprising a pleated first edge (72) and a pleated second edge (74) and an expandable mesh (14) positioned on one side of the pleated filter media, wherein the expandable mesh is bonded (see col. 5, lines 34-35) to the pleated filter media in Figs. 1 and 6-8 and col. 3, line 9 to col. 7, line 19.

Wolfe teaches using fibrous filter media having small openings to filter air passing through a window in Figs. 1-5 and col. 1, line 11 to col. 5, line 65.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pleated filter media and expandable mesh of Kubokawa et al. into the apparatus of Sweeney to remove particulate matter and allergens from air passing through a window, as suggested by Wolfe in col. 1, lines 36-50 and col. 2, lines 11-34.

Wolfe teaches providing at least two support members (formed by the metal screen) in the outer and inner frames to provide support for the filter media in col. 5, lines 61-65.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the at least two support members (formed by the metal screen) of Wolfe into the inner and outer front and back panels of Sweeney to provide upstream and downstream mechanical support to prevent the filter media from tearing or being otherwise damaged, as suggested by Wolfe in col. 5, lines 61-65.

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Kubokawa et al. discloses an air filtration apparatus comprising a pair of frame components comprising a plurality of clips (42,44,46) to hold one of the frame components to the second frame component, wherein the frame components are notched to support the clips in Figs. 1 and 4 and col. 4, lines 1-6.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the clips of Kubokawa et al. into the apparatus of Sweeney to maintain the inner frame and outer frame in a desired position, as suggested by Kubokawa et al. in col. 4, lines 1-6.

With regard to claim 3, Kubokawa et al. discloses the pleated filter media having a pleat spacing of 40 mm (7.6 pleats per foot) in col. 5, lines 54-59.

With regard to claim 4, Kubokawa et al. discloses the pleated media being a synthetic electrostatic filter media (FILTRETE™) in col. 6, lines 46-60.

With regard to claim 5, Sweeney discloses the outer and inner frames having a rectangular shape in Fig. 1.

With regard to claims 10, 15 and 16, Kubokawa et al. discloses the expandable mesh being formed from welded wire (metal mesh) and laminated to the pleated filter media with glue (adhesive) in col. 5, lines 34-38.

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With regard to claims 11 and 13, Wolfe discloses the at least two front support members and the at least two back support members each forming a rectangular shape (metal screen), wherein the outer frame comprises a first horizontal support and a first vertical support and the inner frame further comprises a second horizontal support and a second vertical support (formed by the wires comprising the metal screen) in col. 5, lines 61-65.

With regard to claims 19 and 21, Sweeney discloses the inner frame and outer frame being wood or another rigid material but does not explicitly teach the frames being formed from one of the recited materials.

Kubokawa et al. discloses forming the frame members from a plastic material in col. 3, lines 31-44.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the plastic material of Kubokawa et al. into the inner and outer frames of Sweeney to provide inner and outer frames that are more resistant to environmental degradation.

10. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, Kubokawa et al. and Wolfe as applied to claim 2 above, and further in view of Chapman.

Sweeney, Kubokawa et al. and Wolfe do not disclose the apparatus further comprising a locking component disposed on the outer frame to prevent movement of the inner frame while supporting the filter media.

Chapman discloses a similar apparatus comprising a locking component comprising a slidable locking tab (20) disposed on the outer frame (5) and adapted for engaging the outer frame and the inner frame (6,7) to prevent movement of the inner frame while supporting the filter media (3) in Figs. 1-5 and col. 2, line 46 to col. 4, line 41.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the slidable tab of Chapman into the apparatus of Sweeney, Kubokawa et al. and Wolfe to form a seal between the inner and outer frames to prevent air from by-passing the apparatus, as suggested by Chapman in col. 3, lines 28-67.

11. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. as applied to claim 2 above, and further in view of Culwell.

Sweeney, Kubokawa et al., Wolfe and Chapman do not disclose the apparatus further comprising a locking component disposed on the outer frame to prevent movement of the inner frame while supporting the filter media.

Culwell discloses a similar apparatus comprising a locking component comprising tape (34) disposed on the outer frame (B) and adapted for engaging the



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outer frame and the inner frame (A) to prevent movement of the inner frame while supporting the filter media (18) in Figs. 3-7 and col. 4, line 20 to col. 5, line 65.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the tape of Culwell into the apparatus of Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. to secure the inner and outer frames together to have a desired size, as suggested by Culwell in col. 5, lines 40-53.

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. as applied to claim 2 above, and further in view of Livingstone et al.

Kubokawa et al. discloses the expandable mesh being an expanded metal mesh (screen) but does not explicitly disclose the metal being aluminum.

Livingstone et al. discloses a similar apparatus comprising an expandable aluminum mesh (16) positioned on one side of a pleated filter media (8) in Fig. 3 and col. 6, lines 33-38

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the aluminum metal of Livingstone et al. into the expandable mesh of Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. to allow the mesh to be produced from a lightweight, durable, readily available and inexpensive material, as is well known in the art.

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13. Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. as applied to claims 2 and 11 above, and further in view of Colon.

With regard to claim 12, Sweeney, Kubokawa et al., Wolfe and Chapman do not disclose the at least two front support members and the at least back support members each forming a die cut design, wherein the die cut design is a logo for a company.

Colon discloses a similar apparatus (40) having a front support member (42) and a back support member (44) each forming a die cut design (formed by openings 56 and 57) in Figs. 1-4 and col. 4, lines 16-64.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the die cut designs of Colon into the apparatus of Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. to provide the apparatus with a decorative exterior design which is aesthetically pleasing.

Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the die cut design in the shape of a company logo to promote brand recognition.

With regard to claim 14, Sweeney, Kubokawa et al., Wolfe and Chapman do not disclose the outer frame further comprising a first circular support member engaging at least two opposing edges on the outer frame, or the inner frame with a first arm and a

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second arm further comprising a second circular support member engaging at least two opposing edges on the inner frame.

Colon discloses a similar apparatus (10C) having a first frame (140) comprising a first circular support member (formed by slots 142) engaging at least two opposing edges on the first frame and a second frame with a first arm and a second arm further comprising a second circular support member (formed by slots 146) engaging at least two opposing edges on the second frame in Figs. 11-12B and col. 6, lines 23-49.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the circular support members of Colon into the apparatus of Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. to provide the apparatus with a decorative exterior design which is aesthetically pleasing.

14. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. as applied to claim 2 above, and further in view of Epstein.

Sweeney, Kubokawa et al., Wolfe and Chapman do not disclose a measuring tape being disposed on the inner frame.

Epstein teaches disposing a measuring tape on an adjustable filter frame in col. 7, lines 30-46.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the measuring tape of Epstein into the inner frame of

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Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. to assist and enhance accurate measuring and cutting, as suggested by Epstein in col. 7, lines 41-46.

15. Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. as applied to claim 2 above, and further in view of Justice.

Sweeney, Kubokawa et al., Wolfe and Chapman do not disclose the inner frame or outer frame being coated.

Justice teaches forming filter frames (20,22) from paper board coated with polypropylene or polyethylene in Figs. 1 and 2 and col. 4, line 32 to col. 5, line 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the coated paper board of Justice into the apparatus of Sweeney, Kubokawa et al. and Wolfe or Chapman and Kubokawa et al. to allow the inner and outer frames to be produced from an inexpensive, moisture resistance, and easily disposable material, as suggested by Justice in col. 4, lines 61-64.

### ***Double Patenting***

16. Claims 2-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 and 5-18 of copending Application No. 10/689,412. Although the conflicting claims are not identical, they are not patentably distinct from each other. Claims 1-3 and 5-18 of the '412

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application claim the same apparatus as instant claims 2-22 except claim 1 of the '412 application additionally recites the expandable mesh being bonded to the face of the pleated filter media. However, the claims of the '412 application still render instant claims 2-22 obvious since anticipation is the epitome of obviousness.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Allowable Subject Matter***

17. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

18. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claim 1, Chapman discloses a method of manufacture comprising providing a filter pack comprising a filter media (3) having a first edge and a second edge, forming an inner frame (7) comprising an inner front panel (formed by the front portion of 7), an inner back panel (formed by the back portion of 7), an inner top side (top side of 7), and an inner bottom side (bottom side of 7), securing the first edge to the inner top side, inserting a support wire (formed by grid 4) between the inner frame and

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the filter media, forming an outer frame comprising an outer front panel (formed by the front portion of 5), an outer back panel (formed by the back portion of 5), an outer top side (top side of 5), and an outer bottom side (bottom side of 5), and inserting a first clip and a second clip (20) to engage the outer frame with the inner frame forming an expandable air filter in Figs. 1-5 and col. 2, line 46 to col. 4, line 41. Chapman teaches the inner frame and outer frame being formed using u-shaped frame sections (5-7) in Fig. 1.

Kubokawa et al. discloses a similar method of manufacture comprising laminating together a pleated filter media (10) with an expanded wire (14) forming a laminate, and pleating the laminate forming a filter pack with a pleated first edge (72) and a pleated second edge (74) in Figs. 1 and 6-8 and col. 3, line 9 to col. 7, line 19.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the media formed by the laminating and pleating steps of Kubokawa et al. into the method of Chapman to provide a filter media that can be collapsed to a compact form for shipping and storage and later re-expanded for installation, as suggested by Kubokawa et al. in col. 4, line 54 to col. 5, line 12.

Justice teaches forming filter frames (20,22) from paper board coated with polypropylene or polyethylene in Figs. 1 and 2 and col. 4, line 32 to col. 5, line 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the coated paper board of Justice into the apparatus of Chapman to allow the inner and outer frames to be produced from an inexpensive,

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moisture resistance, and easily disposable material, as suggested by Justice in col. 4, lines 61-64.

The prior art made of record does not teach or fairly suggest the method of claim 1 comprising forming the inner top side with a first flap and a second flap, forming the inner bottom side with a third flap and a forth flap, adhering the pleated first edge to the inner top side, adhering the first flap to the second flap and adhering the third flap to the fourth flap forming an inner box to contain the filter media, forming the outer top side with a fifth flap and a sixth flap, forming the outer bottom side with a seventh flap and an eighth flap, adhering the fifth flap to the sixth flap and adhering the seventh flap to the eighth flap forming an outer box and forming the outer top side and the outer bottom side.

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Lichtman, Attermeyer, Sinclair, Benjamin, Rehmert, Delts, Lawlor, Sr. and Clayton references disclose similar air filters.


20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Jason M. Greene  
Examiner  
Art Unit 1724

  
8/16/05

jmg  
August 16, 2005